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DEPARTMENT OF THE INTERIOR

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FISH AND WILDLIFE SERVICE

For Release SEPTEMBER 7, 1956

FWS DEVELOPING WATERHOLES FOR DESERT BIGHORN SHEEP

A long-range program of establishing waterholes for desert bighorn sheep has been developed by the Fish and Wildlife Service as a practical means of increasing the number of bighorns in this country, Service Director John L. Farley said today.

The development of these waterholes has increased the available range and effected a better utilization of the range, lowered the disease and predation potential, eased the pressure on existing water supplies, and given the lambing ewes a better chance to produce their offspring by allowing them to disperse more widely.

The program has called for the construction of additional catchment basins and the improvement and better utilization of existing catchment basins and springs.

The ultimate aim is to create waterholes at intervals of five miles or less to insure water reserves for a year or more in a country where evaporation can reach as much as 12 feet a year. On the Desert Game Range in southern Nevada, the Kofa and Cabeza Prieta Game Ranges in southwestern Arizona, and the San Andres National Wildlife Refuge in southern New Mexico, where the development of this program is vital, the average rainfall is less than six inches a year. In some places less than half an inch has been registered in dry years at official measuring stations.

The problem is not only to catch and retain the water which falls on the land as rain or snow but also to protect it against excessive evaporation, from pollution, and from use by other animals, such as wild horses, which can find water on ranges not utilized by bighorn sheep. Pollution consists mostly of debris trampled into the waterholes by the animals or which is washed in by the occasional rains, although before proper modifications were made animals often drowned in the waterholes in their efforts to drink.

To protect against evaporation, "king-size guzzlers," patterned after the "gallinaceous guzzlers" which Western States use to conserve water for upland birds, were developed. These consist of an underground storage vault, suitably covered to protect against the rays of the sun and with the water made available to the animals by a ramp which permits them to walk to the water's edge, regardless of its depth. Such ramps have also been gouged in the smooth rock sides of natural catchment basins in which animals previously had drowned. Water is guided into the storage vault by concrete or stone aprons. In some instances it is possible to take advantage of natural caves on overhanging walls for shade protection against evaporation.

In other instances concrete dams are constructed across gullies or waterways. These dams are usually less than 40 feet long and about 10 or 12 feet high. For the first few years these dams impound water which is available for the sheep. Gradually, however, the area behind the dam is filled with sand, silt and rocks. Flood water soaking into this gravel is stored and protected against excessive evaporation. Capped pipes, which were installed through the concrete dam when it was built, permit the utilization of this water supply, the draw-off from the bottom being fast enough to supply the needs of the sheep but slow enough to make the supply last for many months.

To protect the waterholes from use by animals which can find water elsewhere, the Fish and Wildlife Service places the waterholes in spots accessible only to bighorns or installs a special fence which permits the passage of sheep but which keeps out larger animals. That such protection is necessary is evidenced by the fact that one band of 10 horses completely utilized one small spring which had previously been used by 30 or 40 bighorns.

The types of fence usually used has the lower strand high enough to permit the sheep to go under but low enough to keep the horses out. Because horses have been able to paw down ordinary fences the Fish and Wildlife Service has learned to take special precautions. A bracket, about breast high, is placed on each post. Barbed wire, strung along these brackets, keeps the horse too far from the fence proper to allow any pawing down of the wires.

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